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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/809,510

03/26/2004

Takayoshi Togino

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8590

23838 7590 12/13/2005

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,510

Applicant(s)

TOGINO, TAKAYOSHI

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. The Applicant's claim for priority under 35 U.S.C. 119(a)-(d) is objected to. The instant application declares Takayoshi Togino as the sole inventor of the subject matter being claimed and additionally claims priority to prior application JP2003-091340 filed on 3/28/2003. However, prior application JP2003-091340 identifies Kokichi Kenno as the sole inventor, which is different than that of the instant application. MPEP 201.13 specifically states that to receive benefit of the filing date of a prior application filed in a foreign country, the foreign application must have been filed by the same applicant (inventor) as the applicant in the US, or by his or her legal representative or assigns.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

37 CFR 1.63-1.64 states that the oath or declaration must be made by all of the actual inventors, except as provided for in 1.42, 1.43, 1.47, or 1.67. The instant application declares Takayoshi Togino as the sole inventor of the subject matter being claimed and additionally claims priority to prior application JP2003-091340 filed on 3/28/2003. However, prior application JP2003-091340 identifies Kokichi Kenno as the sole inventor, which is different than that of the instant application. It is unclear who the actual inventor is for the instant application.

Drawings

4. The drawings were received on 3/26/04. These drawings are objected to for the following reason(s) as set forth below.

5. The drawings are objected to because of the following informalities:

Figures 7(a), 10(a), 13(a), 16(a)- the reference label 'Lawer' should read 'Lower'.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to *a single paragraph on a separate sheet within the range of 50 to 150 words*. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. *It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.*

7. The abstract of the disclosure is objected to because of the following informalities:

Abstract, line 2- 'The invention provides a' should read 'A'

The Abstract is too long.

Correction is required. See MPEP § 608.01(b).

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Examples of such errors are provided *infra*.

9. The disclosure is objected to because of the following informalities:

Page 1, line 4- '3.18, 2003' should read 'March 28, 2003'

Page 7, line 9- 'eyepiece optical system 2' should read 'concave mirror 2'

Page 32, line 14- 'give' should read 'given'

Page 36, line 7 (part of Example 4 Table)- Japanese characters should be replaced with English equivalents

Page 44, line 2- 'angle of angle' should read 'angle of diffusion'.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(f) he did not himself invent the subject matter sought to be patented.

11. Claims 1-14 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

The instant application declares Takayoshi Togino as the sole inventor of the subject matter being claimed, which include the features recited in Claims 1-14. Additionally, the instant application claims priority to prior foreign application JP2003-091340 filed on 3/28/2003 in Japan. This prior foreign application JP2003-091340 identifies Kokichi Kenno as the sole inventor, which is different than that of the instant application. Japanese published application JP 2004-301876A, published 10/28/2004 in Japan, identifies Kokichi Kenno as its sole inventor, and similarly claims priority to prior foreign application JP2003-091340. After reviewing the JP 2004-301876A publication, it appears that the drawings of the instant application are exactly the same as that of the JP 2004-301876A publication, the subject matter claimed in the instant application appear to be disclosed in the JP 2004-301876A publication, and the abstract of the instant application appears to be very similar to that of the English abstract of the JP 2004-301876A publication. In addition, the specification of the instant application appears to

be fully disclosed by the English-equivalent specification of the JP 2004-301876A publication. It is unclear who the correct inventor is of the claimed subject matter recited in the instant application. Additionally, it appears that claimed subject matter recited in the instant application may have been derived from the prior foreign application JP2003-091340 and the published JP 2004-301876A publication.

12. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (U.S. Patent Application Publication US2003/0137731A1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Takahashi et al. discloses a projection optical apparatus (See for example Figures 1a, 3, 4a, 5a, 6-9, 13-31) comprising a projection unit (See for example 1L₁, 1L₂, 1R₁, 1R₂ in Figure 4a; Paragraphs 0055-0074) comprising a display device and projection optical systems; a concave mirror (See for example 3₁, 3₂ in Figure 4a; 23 in Figure 23b, 26b) for projecting exit pupils of the projection optical systems onto a given position; and a diffusing plate (See for example 3₁, 3₂ in Figure 4a; 25 in Figure 23b, 26b) located near to images projected through the projection optical systems; wherein at least three such projection units are provided, the projection optical systems magnify and projects an image appearing on the display device, and the diffusing plate has such a diffusion action

that the exit pupil images are each projected in an at least partially overlapping fashion (See 2R, 2L in Figure 4a; Figure 4b). Takahashi et al. further discloses the diffusing plate being a transmission hologram (See Paragraph 0126); the transmission hologram is located such that a light ray from the display device to the exit pupils transmits twice through the transmission hologram (See Figures 23-25), and further the transmission hologram is located such that an angle of first transmission through the transmission hologram is different from an angle of second transmission through the transmission hologram (See Figures 23-25); the concave mirror comprises a Fresnel concave reflecting mirror (See for example 23 in Figure 23); the diffusion plate has such a property that an angle of diffusion at full width half maximum is up to 20° (See Paragraph 0128); the diffusing plate has such a property that an angle of diffusion at full width where light intensity becomes 1/10 is up to 40° (See Paragraph 0128); the projection units and the concave mirror are positioned such that axial chief rays from the projection optical systems in each projection unit are obliquely incident on the concave mirror (See for example Figures 23-25); both zero-order light upon the first transmission through the transmission hologram and zero-order light upon the second transmission through the transmission hologram pass through a position different from those of the exit pupil images (See for example Figures 24b, 24c, 25a, 25b); and the diffusing plate has a bending action by diffraction (See Figures 24-25; Paragraph 0129).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5757544 to Tabata et al.

Tabata et al. is being cited to evidence a conventional image display apparatus (See for example Figures 1-2, 12, 19) that includes a projection unit with a display device and projection optical system (See 42, 43, 47, 48 in Figure 19); a concave mirror (See 50 in Figure 19) for projecting exit pupils of the projection optical systems onto a given position; and a diffusing plate (See 49 in Figure 19) located near to images projected through the projection optical systems. However, Tabata et al. does not explicitly disclose three or more projection units, or the diffusing plate having such a diffusion action that the exit pupil images are each projected in an at least partially overlapping fashion.

U.S. Patent No. 4799739 to Newswanger.

Newswanger is being cited to evidence a conventional autostereoscopic image display apparatus (See for example Figures 1, 3) that includes plural projection units (See 20a, 20b, 20c, etc. in Figure 1); a mirror (See 54 in Figure 3) for projecting exit pupils of the projection optical systems onto a given position; and a diffusing plate (See 22 in Figure 1; 52 in Figure 3) located near to images projected through the projection optical systems. However, Newswanger does not explicitly disclose the mirror being concave or the diffusing plate having such a diffusion action that the exit pupil images are each projected in an at least partially overlapping fashion.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias
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Group Art Unit 2872
12/8/05